

## ABSTRACT

A method of treating a coal combustion flue gas, which includes injecting a molecular halogen or thermolabile molecular halogen precursor able to decompose to form molecular halogen at flue gas temperature. The molecular halogen converts elemental mercury to mercuric halide adsorbable by alkaline solids such as subbituminous or lignite coal ash, alkali fused bituminous coal ash capturable in whole or part by electrostatic precipitators (ESPs),  
5 baghouses (BHs) , fabric filters (FFs), dry flue gas desulphurization solids, with or without subsequent adsorption by a liquid such as a flue gas desulphurization scrubbing liquor.  
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